## AMENDMENTS TO THE SPECIFICATION

The Specification as amended below show added text with <u>underlining</u> and deleted text with ~~strikethrough~~.

Please REPLACE paragraph [0023] with the following amended paragraph:

[0023] The $2^n$ level quantizing method will be described in more detail below. If the samples $r(k)$ in the above-described Equation (1) are substituted with $2^n$ level quantized samples $q(k)$, the following equation is obtained:

$$\Lambda(n) = \sum_{k=1}^{n+L} q(k)q^*(k-N) \qquad \cdots (2)\underline{.}$$

Please REPLACE paragraph [0024] with the following amended paragraph:

[0024] If a sample $\max r(k)$ having a largest value among the samples $r(k)$ is $2^n$, and the other samples $r(k)$ are proportionally magnified or scaled, the $2^n$ level quantized samples $q(k)$ can be represented by a quantization function $Q_L$ as follows:

$$q(k) = Q_L\left[\frac{2^n r(k)}{\max r(k)}\right] \qquad \cdots (3)\underline{.}$$

Please REPLACE paragraph [0025] with the following amended paragraph:

[0025] The term $Q_L[x]$ in Equation (3) represents a complex quantization to quantize the scaled sample values into levels of $2^i$ in accordance with the following equation:

$$Q_L[x] \cong Q[\text{Re}\{x\}] + jQ[\text{Im}\{x\}] \qquad \cdots (4)\underline{.}$$

Please REPLACE paragraph [0026] with the following amended paragraph:

[0026] The term $Q_L[x]$ can also be represented as follows:

$$Q_L(x) \cong \begin{cases} 2^{[\log_2 x]}, & x > 0 \\ 0, & x = 0 \end{cases} \qquad \cdots (5)\underline{.}$$

Please REPLACE paragraph [0028] with the following amended paragraph:

[0028]    If the shifter is used instead of the multiplier, Equation (1) can be represented as follows:

$$\Lambda(n) = \sum_{k=1}^{n+L} \{q(k) << l(k-N)\} \qquad \cdots (6)$$

$$l(k-N) = \log_2 q^*(k-N) \qquad \cdots (7).$$

Please DELETE the paragraph number [0031] between paragraphs [0030] and [0032].